**3GPP SA WG2 Meeting #170 S2-2507470**

**Gothenburg, Sweden, 25-29 August 2025**

Title: [Draft] Reply LS on the RAN simulation assumptions for ULBC

Response to: LS on the RAN simulation assumptions for ULBC (S4-251584/S2-2506169)

Release: Release 20

Work Item: FS\_ULBC

Source: SA2

To: SA4

Cc: RAN1, RAN2, RAN4, SA1, CT1

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

Attachments: None

**1. Overall Description:**

SA2 would like to thank SA4 for the “LS on the RAN simulation assumptions for ULBC”.

Please find answers to the questions related to SA2:

*SA4 kindly asks SA2 and RAN2 to comment on*

* *the different options among UP/CP and IP/Non-IP and the respective overall packet overhead (including RTP/UDP/IP with RoHC, PDCP, RLC and MAC and any potential AS layer optimization if applicable), and if there is any preferred option, and*

**[SA2 answer]:** SA2 has documented a number of alternative solutions in TR 23.700-019 for “Key Issue #1: Support of IMS voice call over NB-IoT NTN via GEO satellite connecting to EPC” that cover various options related to a) using User Plane or Control Plane CIoT EPS Optimisation and b) IP or non-IP PDN type. SA2 has not yet concluded on the solutions for Key Issue #1. The final protocol overhead depends on the selected solutions.

The conclusion on all these issues and therefore the estimated overhead is expected to be provided later. The completion date of the FS\_5GSAT\_Ph4\_ARC SID is December 2025 (SA#110).

* *specifically, whether a packet overhead of 1 byte of MAC header is realistic.*

**[SA2 answer]:** SA2 believes RAN2 should answer this question and also provide feedback on the PDCP, RLC and MAC overhead expected.

**2. Actions:**

**To SA4:**

**ACTION:** SA2 asks SA4 to take into account the answers provided.

**3. Date of Next TSG SA WG2 Meetings:**

TSG-SA2 Meeting #171 13-17 October 2025 Wuhan, PRC

TSG-SA2 Meeting #172 17-21 November 2025 Dallas, TX, USA